

Roll No.

BCA–503 (DE2)

B. C. A. (Fifth Semester) EXAMINATION, 2024-25

ADVANCE JAVA

Time : $2\frac{1}{2}$ Hours

Maximum Marks : 60

Note : All questions are compulsory.

Section—A

1 each

(Multiple Choice Questions)

1. (a) Which tag should be used to pass information from JSP to included JSP ? (CO2, BL-2)
 - (i) Using <%jsp:page> tag
 - (ii) Using <%jsp:param> tag
 - (iii) Using <%jsp:import> tag
 - (iv) Using <%jsp:useBean> tag

P. T. O.

(b) The following is not the component of JavaFX : (CO1, BL-2)

- (i) Prism
- (ii) Scene Graph
- (iii) Webview
- (iv) Browser

(c) Application is an instance of which class :

(CO2, BL-1)

- (i) javax.servlet.Application
- (ii) javax.servlet.HttpContext
- (iii) javax.servlet.Context
- (iv) javax.servlet.ServletContext

(d) Which method will called by launch() of Application class in JavaFX? (CO4, BL-2)

- (i) start()
- (ii) run()
- (iii) load()
- (iv) scene()

- (e) Which one is the correct order of phases in JSP life cycle ? (CO2, BL-2)
- (i) Initialization, Cleanup, Compilation, Execution
 - (ii) Initialization, Compilation, Cleanup, Execution
 - (iii) Compilation, Initialization, Execution, Cleanup
 - (iv) Cleanup, Compilation, Initialization, Execution
- (f) Struts combines which of these in to a unified Framework ? (CO4, BL-4)
- (i) Java Servlets
 - (ii) Java Server pages
 - (iii) Custom tags and Message Resources
 - (iv) All of the above
- (g) Servlet was developed by : (CO1, BL-2)
- (i) Denis Ritchie
 - (ii) Pavni Diwanji
 - (iii) Gavin King
 - (iv) Mike Youngstrom

- (h) Who developed JAVAFX ? (CO3, BL-2)
- (i) Denis Ritchie
 - (ii) Chris Oliver
 - (iii) Gavin King
 - (iv) Mike Youngstrom
- (i) Which is correct Hierarchy in JavaFx Application ? (CO5, BL-2)
- (i) Scene → Scene Graph → Stage
 - (ii) Stage → Scene → Scene Graph
 - (iii) Scene Graph → Scene → Sage
 - (iv) None of the above
- (j) POJO stands for : (CO3, BL-2)
- (i) Plain Old Java Object
 - (ii) Plain Object Java Object
 - (iii) Plain Observer Java Object
 - (iv) None of the above
- (k) Spring is developed by : (CO4, BL-2)
- (i) Rod Johnson
 - (ii) Daniel Fernández
 - (iii) Gavin King
 - (iv) Pivotal Software

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- (1) AOP stands for : (CO5, BL-2)
- (i) Aspect Oriented Programming
 - (ii) Any Object Programming
 - (iii) Asset Oriented Programming
 - (iv) None of the above
2. Attempt any *four* of the following : 3 each
- (a) Discuss various features of JavaFX.
(CO3, BL-3)
 - (b) Discuss various merits of Servlet over CGI.
(CO1, BL-3)
 - (c) Discuss features of Struts Framework.
(CO2, BL-4)
 - (d) Discuss various Scriptlet Tags in JSP.
(CO4, BL-4)
 - (e) Discuss various IDE and their importance to develop the web applications. (CO1, BL-4)

Section—B

(Long Answer Type Questions)

3. Attempt any *two* of the following : 6 each
- (a) Design develop and implement a JavaFX application to draw a Pie chart. (CO3, BL-6)

P. T. O.

- (b) Discuss the working architecture of JavaFX and create a diagram for the same.

(CO3, BL-6)

- (c) Design develop and implement a program using JSP to perform database insertion.

(CO2, BL-6)

4. Attempt any *two* of the following : 6 each

- (a) Design develop and implement a program to retrieve the data from the database in Servlet.

(CO1, BL-6)

- (b) Discuss the concept of Spring framework. Create a diagram and discuss various spring modules.

(CO5, BL-6)

- (c) Discuss the life cycle of JSP with a suitable diagram.

(CO2, BL-6)

5. Attempt any *two* of the following : 6 each

- (a) Discuss the working of sendRedirect() method with a suitable diagram and create a program for the same.

(CO1, BL-6)

- (b) Discuss the importance of session tracking in Servlet. Write a program using any session management technique. (CO1, BL-6)
- (c) Discuss the importance of MVC in Struts framework. Explain the Struts2 workLong-term debt to increase potential returns to equity holders flow with diagram.

(CO4, BL-6)